REMARKS/ARGUMENTS

Claims 1-18, 20-26 and 32 stand rejected in the outstanding Official Action. Claims 20, 21, 23 and 24 have been amended and therefore claims 1-18, 20-26 and 32 remain in this application.

The Examiner's indication of PTO acceptance of the originally filed formal drawings is very much appreciated. Additionally, the Examiner's acknowledgment of Applicant's claim for priority and receipt of the certified copy of the priority document is appreciated. Finally, the Examiner's consideration of the prior art submitted with Applicant's previously filed Information Disclosure Statement is appreciated.

Claims 1-18, 20-26 and 32 stand rejected under 35 USC §112 (first paragraph) as allegedly failing to comply with the written description requirement. The Examiner contends that the phrase added to Applicant's independent claim 1 in the previous Amendment, i.e., "wherein successive transitions . . . " is not supported in the drawings, the formulae and the text in Applicant's originally filed specification.

The Examiner's attention is directed to page 19 and the paragraph between lines 11 and 18 which discusses what is shown in Figures 5a-5d. In the discussion of Figure 5c on page 21, lines 20-22, the specification states "the average potential seen by the electromagnet 10 over the period corresponds to the broken hatched area less the unbroken hatched areas which clearly results in a net small positive voltage." Turning to Figures 5c and 5d, it can be seen by looking at the waveform of switching signal 24b, the disclosed period covers the duration of the "hatched" portion of the output including the portions to the left of the leftmost vertical dotted line and to the right of the rightmost dotted vertical line. Thus, the hatched areas corresponding

to $-V_S$ on both the left and the right sides of V_{mag} are also a portion of the period of the signal pulse. This confirms that the period of the signal pulse of 24b is not only the central positive "ON" portion but also includes the much smaller "OFF" portions at either side.

The discussion of Figures 5a-5d clearly envision successive pulses and it can be seen that successive pulses clearly disclose successive transitions between on and off states of the first and second switching signals (Figures 5a and 5b show on and off states of the first and second switching signals 24a and 24b, respectively, whereas Figures 5c and 5d show on signals of both switching signals). The limitation added by the claim phrase "wherein successive transitions . . ." requires that switching signals are "separated in time by a minimum time period." The switching signals refer to 24a and 24b, and looking at Figures 5c and 5d, in both instances, the first portion and the last portion of each period comprises a "off" portion of the "period" illustrated. Thus, if signal 24b were "ON" for a large portion of the period as shown in Figures 5c and 5d and was also "ON" for a similar large portion of a subsequent period, there would still be a minimum period of time (referred in the specification to the "fixed offset" at page 24, line 7) comprising the "OFF" at the beginning and at the end of each period as shown with respect to signal 24b.

Thus, Figures 5c and 5d and their discussion from page 21, line 7 through page 22, line 2, clearly disclose successive transitions between on and off states of the first switching signal or of the second switching signal that occur in different periods are separated in time by a minimum time period.

This claim phrase is also disclosed in the formula at line 3 on page 24 which indicates that the width W_{min} is part of the equation defining the width of the 24b switching signal. W_{min}

is defined as the "fixed offset" which is added or subtracted in class AB mode (see page 23, line 3). Thus, the equation at line 3, page 24 clearly discloses that the transitions between "ON" and "OFF" states (either the "OFF" to "ON" transition or the "ON" to "OFF" transition) which occur are separated in time by a minimum time period. As is shown in Figures 5c and 5d, even the maximum on period of signal 24b has a transition from "ON" to "OFF" at the end of one period which is separated in time from the transition from "OFF" to "ON" in the next successive period. One of ordinary skill in the art reviewing this formula and the definitions therein would clearly understand that it discloses the "successive transitions" clause in claim 1 as discussed above.

Finally, the effect and operation of the "successive transitions" clause is discussed on page 24, lines 4-8, which states "transistor 20b has a reduction in width in its central pulse corresponding to the fixed offset **to ensure a minimum gap between voltage changes between periods**." Voltage changes are "transitions between on and off states" of the signals and thus this paragraph clearly addresses the "separated in time by a minimum time period" with the "minimum gap."

Thus, in Applicant's drawings, in Applicant's formula and in the text of the specification itself, there is clear disclosure of the claimed "successive transitions" clause and therefore this would clearly describe and enable one of ordinary skill in the art to practice this invention and thereby clearly avoids any possibility of "new matter."

In the second paragraph in section 4 of the Official Action, the Examiner indicates that it is not clear "exactly what is being claimed." The Examiner notes that Applicant's originally submitted claim 1 recited a rule relating to pulse width of output voltage. This claim and the cited recitation was in error. Applicant recognized the error and amended claim 1 in the previous

amendment to reference that the limitation was that the switching signal voltages do not fall below a **minimum pulse width**, not necessarily a **minimum voltage**.

Should the Examiner believe the claim specifies a "switching signal voltages [instead of pulse width] does not fall below a minimum," he is respectfully requested to point out where this language occurs in the claim. Applicant believes the corrected language of claim 1 reads "wherein the determined width does not fall below a minimum pulse width." Therefore, Applicant's previous Amendment corrected an error in claim 1 and claim 1 as it was previously amended and is currently constituted is believed to be completely correct.

Claims 20 and 23-26 stand rejected under 35 USC §112 (second paragraph). The phrase "processing means" refers to both a computer which is recited in the application, as well as signal generator 28 and other structures used to generate the signals. Applicant has amended claim 20 to reference a computer, given that claim 20 is directed to a computer program product.

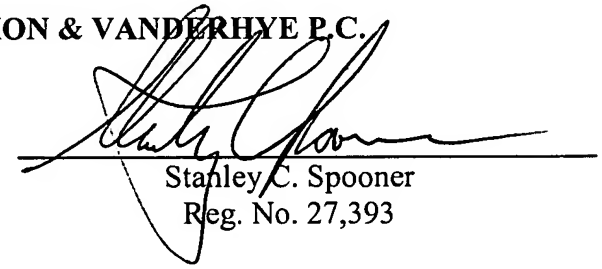
With respect to the "processing means" language contained in claims 23 and 24, Applicant has also noted similar language in claim 21. In each instance, this language has been changed to read "computer," as the signal generator 28 can include elements which may be considered a computer of sorts by those of ordinary skill in the art. However, claims 21, 23 and 24 are not limited to any particular type of computer and there are numerous structures and combinations of structures which are believed to meet the definition "computer" (including the illustrated signal generator 28 and other elements) Accordingly, the above amendments to claims 20, 21, 23 and 24 (claims 25 and 26 depend from claims 24 and 25, respectively) are believed to obviate any further rejection of claims 20 and 23-26 under 35 USC §112 (second paragraph).

The Examiner's failure to cite any prior art which, in his opinion, anticipates or renders obvious the subject matter of claims 1-18, 20-26 and 32 is very much appreciated and is taken as an indication of the allowability of such claims in the event the above-cited rejections have been cured.

Having responded to all objections and rejections set forth in the outstanding Official Action, it is submitted that claims 1-18, 20-26 and 32 are in condition for allowance and notice to that effect is respectfully requested. In the event the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of the above claims, the Examiner is respectfully requested to contact Applicant's undersigned representative.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: 

Stanley C. Spooner
Reg. No. 27,393

SCS:kmm
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100